Reversing Childhood Obesity: A National Movement

Paula Card-Higginson

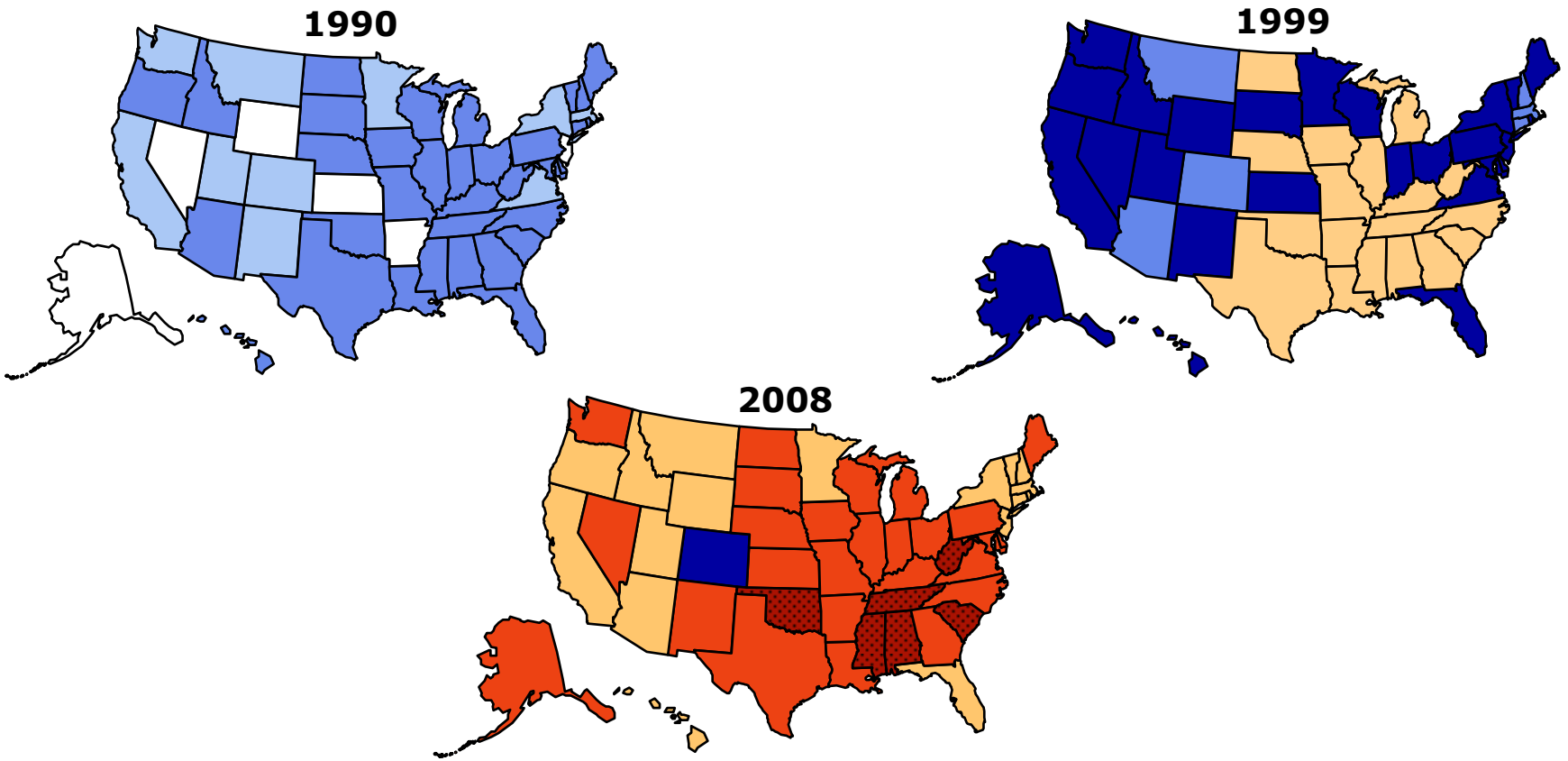
Deputy Director,
Robert Wood Johnson Foundation
Center to Prevent Childhood Obesity

February 15, 2010

Obesity Trends* Among U.S. Adults

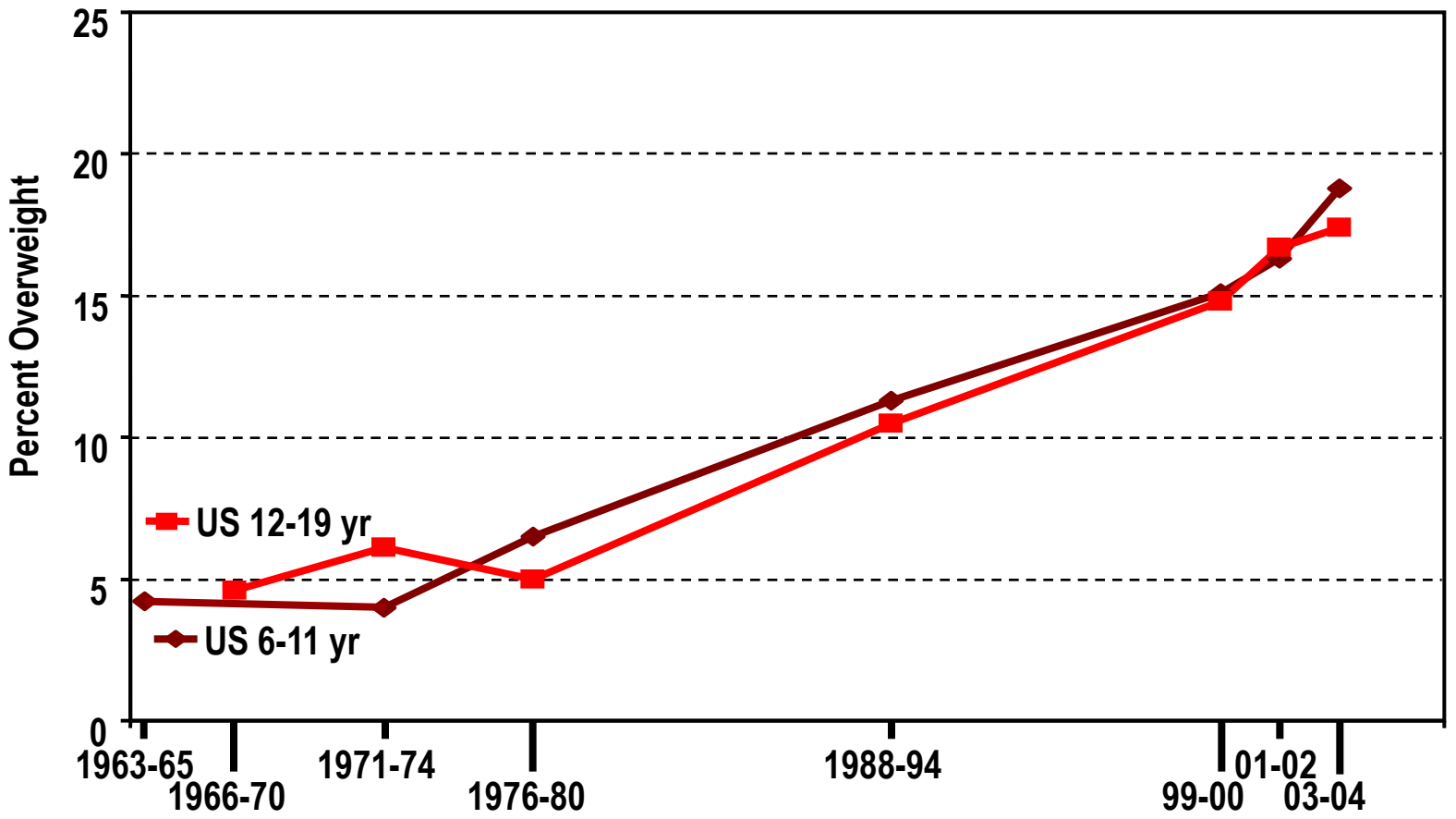
BRFSS, 1990, 1999, 2008

(*BMI ≥30, or about 30 lbs. overweight for 5'4" person)



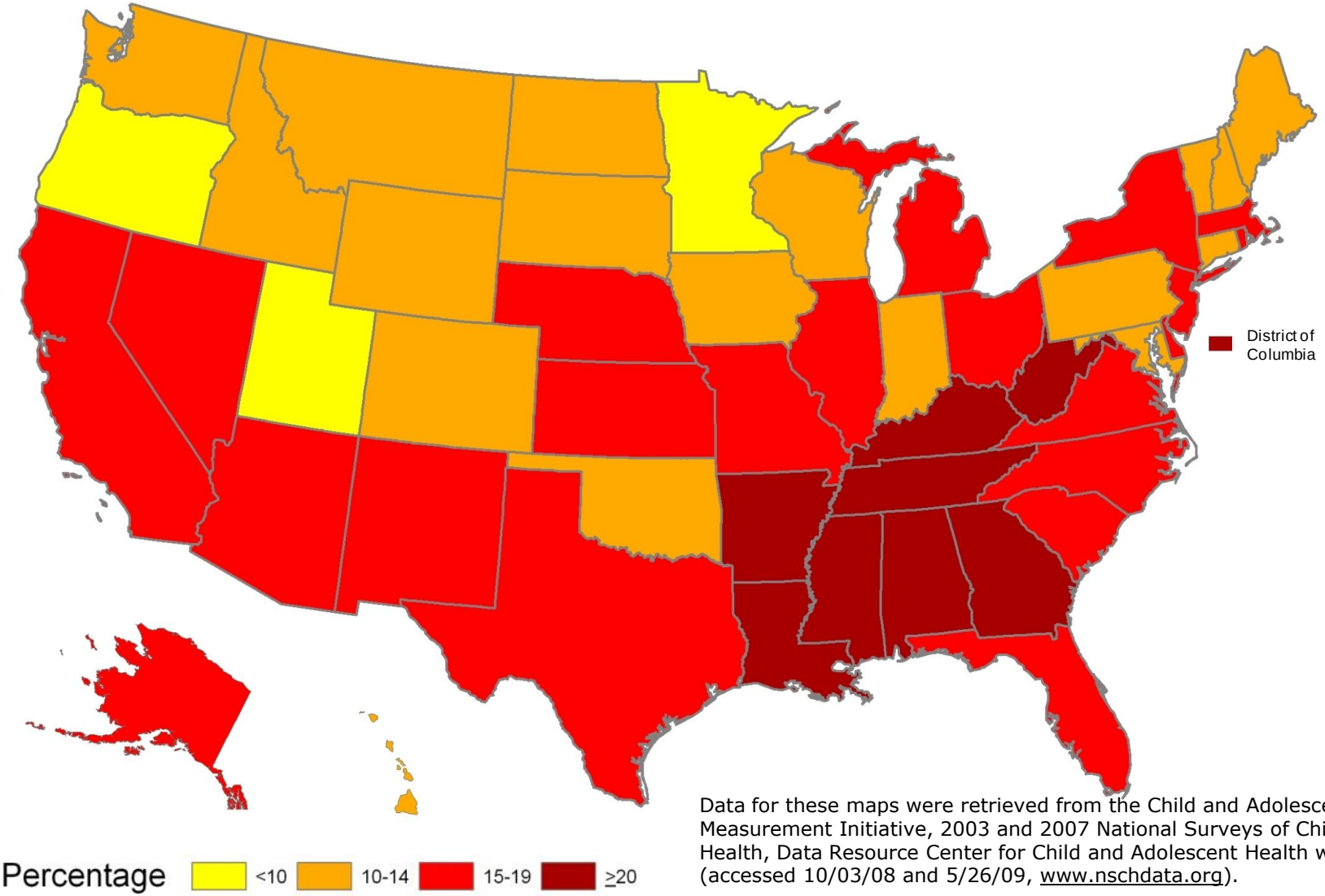
Source: CDC Behavioral Risk Factor Surveillance System.

National Childhood Obesity Trends



NHANES data sources: Ogden et al. *Prevalence and Trends in Overweight Among US Children and Adolescents, 1999-2000*. JAMA 2002;288(14):1728-1732. Ogden et al. *Prevalence of Overweight and Obesity in the United States, 1999-2004*. JAMA 2006;295(13):1549-1555.

Percentage of Children who are Obese Aged 10–17 Years by State (2007)



Data for these maps were retrieved from the Child and Adolescent Health Measurement Initiative, 2003 and 2007 National Surveys of Children's Health, Data Resource Center for Child and Adolescent Health website (accessed 10/03/08 and 5/26/09, www.nschdata.org).

Act 1220 of 2003: Arkansas Child and Adolescent Obesity Initiative

Paula Card-Higginson

Associate Director,
Arkansas Center
for Health Improvement

ACHI
Arkansas Center for Health Improvement

84th General Assembly Act 1220 of 2003

An act to create a Child Health Advisory Committee; to ***coordinate statewide efforts to combat childhood obesity and related illnesses; to improve the health of the next generation of Arkansans****; and for other purposes.*

Goals:

- Change the environment within which children go to school and learn health habits every day
- Engage the community to support parents and build a system that encourages health
- Enhance awareness of child and adolescent obesity to mobilize resources and establish support structures

Act 1220 Requirements

1. **Establishment of an Arkansas Child Health Advisory Committee**
2. **Vending machine content and access changes**
3. **Physical activity / education requirements**
4. **Requirement of professional education for all cafeteria workers**
5. **Public disclosure of “pouring contracts”**
6. **Establishment of local parent advisory committees for all schools**
7. **Confidential child health report delivered annually to parents with body mass index (BMI) assessment**

Statewide BMI Screening

Guiding Principles for BMI Reporting in Children & Adolescents

- **BMI assessment is a health screening tool like vision, hearing or scoliosis screenings routinely performed in public schools**
- **All students should be assessed – no one singled out**
- **Confidentiality should be maintained in measuring and reporting**
- **Confidential Child Health Reports are a health advisory tool for parents – not a grade or report card**

Child Health Report (2004)

BRYANT SCHOOL DISTRICT
BRYANT ELEMENTARY SCHOOL
200 NW 4TH
BRYANT, AR 72022

[redacted]

T60PC394

Dear Parent or Gu

This Child Health R
because of her we

Why is this report

If a child is overwe
are overweight are
disease. Children w

Is your child's we

Your child was wei
tall and weighed 13
of 26.4 for a 10-yea
problem for Saman

What is a BMI?

A BMI tells if a pers
It is a screening tes
problems early. Thi
problems from deve
changes as children
boys. So, it is impor
if your child is grow

What should you d

Because Samantha
visit your doctor, ple
because of her weig
example, the Ameri

- Offer healthy snacks, like fruits, vegetables, and other foods low in sugar and salt.
- Drink fewer sodas and drink more water, low-fat milk, or low-calorie drinks.
- Limit television, video games, and computer time to no more than 2 hours a day.
- Take family walks, bicycle, run, or exercise with your child.

Healthy habits start early. Please be aware that diet, physical activity, and other health habits will affect your child's health and life. Thank you.

On behalf of your child's school

Joe Thompson

Joseph W. Thompson, MD, MPH
Director, Arkansas Center for Health Improvement

Please go to www.achi.net for more information.
A free CME project for doctors is available at www.achi.net.

A generous gift from the American Diabetes Association made distribution of this letter possible.

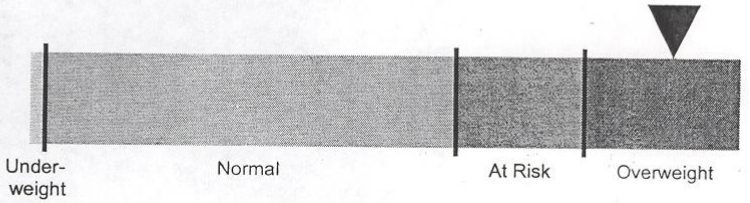
Is your child's weight a health problem?

Your child was weighed and measured at Bryant Elementary School on November 17, 2003. [redacted] was 60.5 inches tall and weighed 137.4 pounds. Based on her height and weight, [redacted] has a Body Mass Index (BMI) of 26.4. A BMI of 26.4 for a 10-year-old girl suggests that your child may be OVERWEIGHT (see chart). This may be a major health problem for [redacted].

What is a BMI?

A BMI tells if a person may be overweight or underweight. It is a screening test. Doctors use screening tests to find problems early. This may help prevent more serious problems from developing later. A healthy BMI number changes as children age and is different between girls and boys. So, it is important to measure BMI each year to see if your child is growing and developing in a healthy way.

Your Child's BMI



The arrow shows how your child's BMI compares with other Arkansas school children.

What should you do?

Source: Arkansas Center for Health Improvement, Little Rock, AR, 2004.

Spanish Child Health Report (2005)

EXAMPLE SCHOOL DISTRICT
EXAMPLE SCHOOL NAME
Address
City, AR, #####

May 16, 2005

Parent Name
«MailingAddress1»
«MailingCity», «MailingState» «Zip»

Estimados Padres:

Esta carta importante se refiere a la salud de Example Student. Por favor léala toda.

Muchos ni
estatura y
el percenti
está al ries

Si un niña
exceso de
que están
sobrepeso
otros prob

Raramente
muscular.
IMC está a
doctor de s

¿Por qué
Las leyes
reporte so
con la vist
que se ton
que, es im

¿Es el pes
El pasado
la escuela
y pesó 137
sugiere qu

¿Qué debe hacer usted?
Dado que el IMC de EXAMPLE sugiere que ella está **sobrepeso**, seria bueno que hablara con el doctor de su niña. Por favor enséñele esta carta al doctor (EXAMPLE's BMI was **30.8** or **97.4** percentile). Su doctor verificara el IMC de su niña y se asegurara que las medidas que se tomaron en la escuela son las correctas. Además, su doctor puede informarle acerca de una alimentación saludable y actividades físicas para su niña. Por ejemplo, la Academia Americana de Pediatría es un grupo de médicos que atienden a niños y sugieren que su familia debe de:

- Ofrecer bocadillos saludables tales como frutas, verduras y otras comidas bajas en azúcar y sal.
- Beber menos sodas y tomar más agua, leche desgrasada o bebidas bajas en calorías.
- Limitar a dos horas diarias el tiempo viendo televisión o jugando videos.
- Hacer ejercicios con sus niños tales como corriendo, caminando o usando la bicicleta.

Los hábitos saludables empiezan a una edad temprana. Por favor, esté conciente que la alimentación y la actividad física afectarán la salud y vida de su niña.

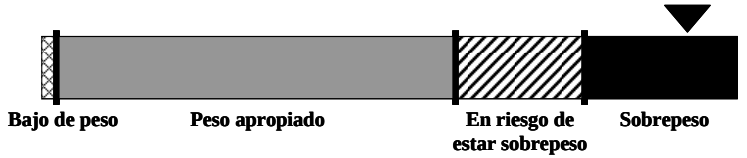
Gracias,
EXAMPLE SCHOOL NAME

Para mayor información, visite www.achi.net.

¿Por qué se midió el IMC en la escuela?
Las leyes del estado de Arkansas requieren que la escuela de su niña mida el IMC cada año y que se le envíe a usted un reporte sobre los resultados. En las escuelas de Arkansas también se practican pruebas iniciales para buscar problemas con la vista y la audición de los niños. Medir el IMC de su niña es otra manera de ayudarle a cuidar su salud. Acciones que se tomen ahora pueden ayudar a disminuir el riesgo de desarrollar enfermedades serias cuando crezca su niña. Así que, es importante medir el IMC cada año para ver si su niña está creciendo y desarrollando de una manera saludable.

¿Es el peso de su niña un problema de salud?
El pasado 3/1/05, su niña fue medida y pesada en la escuela. EXAMPLE midió 4 pies con 8 pulgadas y pesó 137.4 libras, lo que le da un IMC que sugiere que ella pueda estar **sobrepeso**.

El IMC de su Niña



La línea demuestra como el IMC de su niña se compara con el de otros niños en las escuelas de Arkansas.

¿Qué debe hacer usted?

Source: Arkansas Center for Health Improvement, Little Rock, AR, 2005.

Participation in Arkansas BMI Assessments (Grades K, 2, 4, 6, 8 and 10)

Category	Year 1 ('03–'04)		Year 2 ('04–'05)		Year 3 ('05–'06)		Year 4 ('06–'07)		Year 5 ('07–'08)		Year 6 ('08–'09)	
	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total
Participation*												
Public schools	**94.5%**	1,056 of 1,118	**98.8%**	1,110 of 1,124	**98.7%**	1,082 of 1,106	**99.2%**	1,062 of 1,071	**99.2%**	1,069 of 1,078	**98.7%**	1,072 of 1,086
Students (K, 2, 4, 6, 8 and 10)	**92.8%**	201,669 of 217,206	**96.1%**	209,563 of 217,460	**92.7%**	205,526 of 221,758	**97.1%**	223,214 of 229,815	**98.5%**	217,601 of 220,946	**97.9%**	216,871 of 221,583
Student data		**201,669**		**209,563**		**205,526**		**223,214**		**217,601**		**216,871**

Results include all data available for years 1, 2, 3, 4 and 5 for grades K, 2, 4, 6, 8 and 10, and year 6 data for the same grades received by June 11, 2009. The most common reason students were not assessed for BMI was absence from school. Fluctuation in the total number of public schools each year is due to school closings, new school openings and mergers. Only schools with students in even-number grades were included in this report. Source: *Assessment of Childhood and Adolescent Obesity in Arkansas* (Year 6, Fall 2008 – Spring 2009). Little Rock, AR: ACHI; September 2009.

Percentage of Arkansas Students by Weight Classification

Category	Year 1 ('03 – '04)	Year 2 ('04 – '05)	Year 3 ('05 – '06)	Year 4 ('06 – '07)	Year 5 ('07 – '08)	Year 6 ('08 – '09)
Obese	20.8%	20.7%	20.4%	20.4%	20.5%	20.4%
Overweight	17.3%	17.3%	17.2%	17.3%	17.4%	17.2%
Healthy weight	60.2%	60.1%	60.6%	60.5%	60.2%	60.4%
Underweight	1.7%	1.9%	1.8%	1.8%	1.9%	1.9%
Total students assessed*	201,669	201,669	201,669	201,669	201,669	201,669

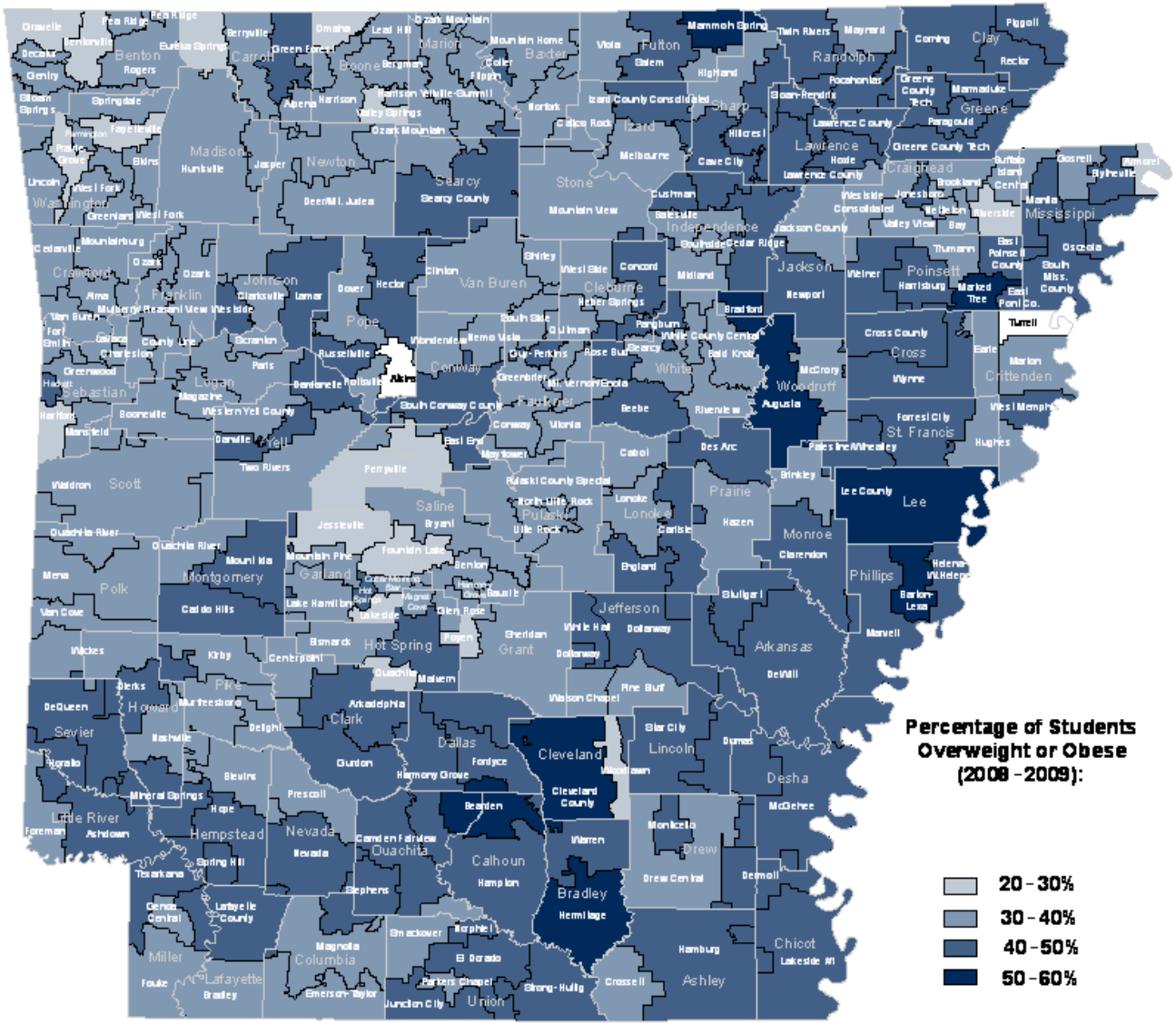
Results include all data available for years 1, 2, 3, 4 and 5 for grades K, 2, 4, 6, 8 and 10, and year 6 data for the same grades received by June 11, 2009. The most common reason students were not assessed for BMI was absence from school. Fluctuation in the total number of public schools each year is due to school closings, new school openings and mergers. Only schools with students in even-number grades were included in this report. Source: Assessment of Childhood and Adolescent Obesity in Arkansas (Year 6, Fall 2008 – Spring 2009). Little Rock, AR: ACHI; September 2009.

Reasons for "Unable to Assess"

Reason	Year 1 ('03–'04)	Year 2 ('04–'05)	Year 3 ('05-'06)	Year 4 ('06-'07)	Year 5 ('07-'08)	Year 6 ('08-'09)
Absent from school	6.3%	7.7%	6.7%	8.1%	7.4%	7.0%
Not attending that school	3.8%	1.4%	0.4%	6.8%	3.4%	2.0%
Parent refused to allow measurement	3.7%	3.2%	3.4%	2.9%	4.1%	4.0%
Student refused measurement	1.7%	2.6%	2.7%	3.3%	2.3%	2.0%
Other	1.1%	0.6%	0.6%	0.8%	0.6%	1.6%
Disability prohibited measurement	0.2%	0.2%	0.2%	0.3%	0.2%	0.3%
Student was pregnant	0.1%	0.1%	0.1%	0.1%	0.04%	0.04%
Wt exceeded scale limits	N/A	N/A	N/A	0.03%	0.02%	0.03%

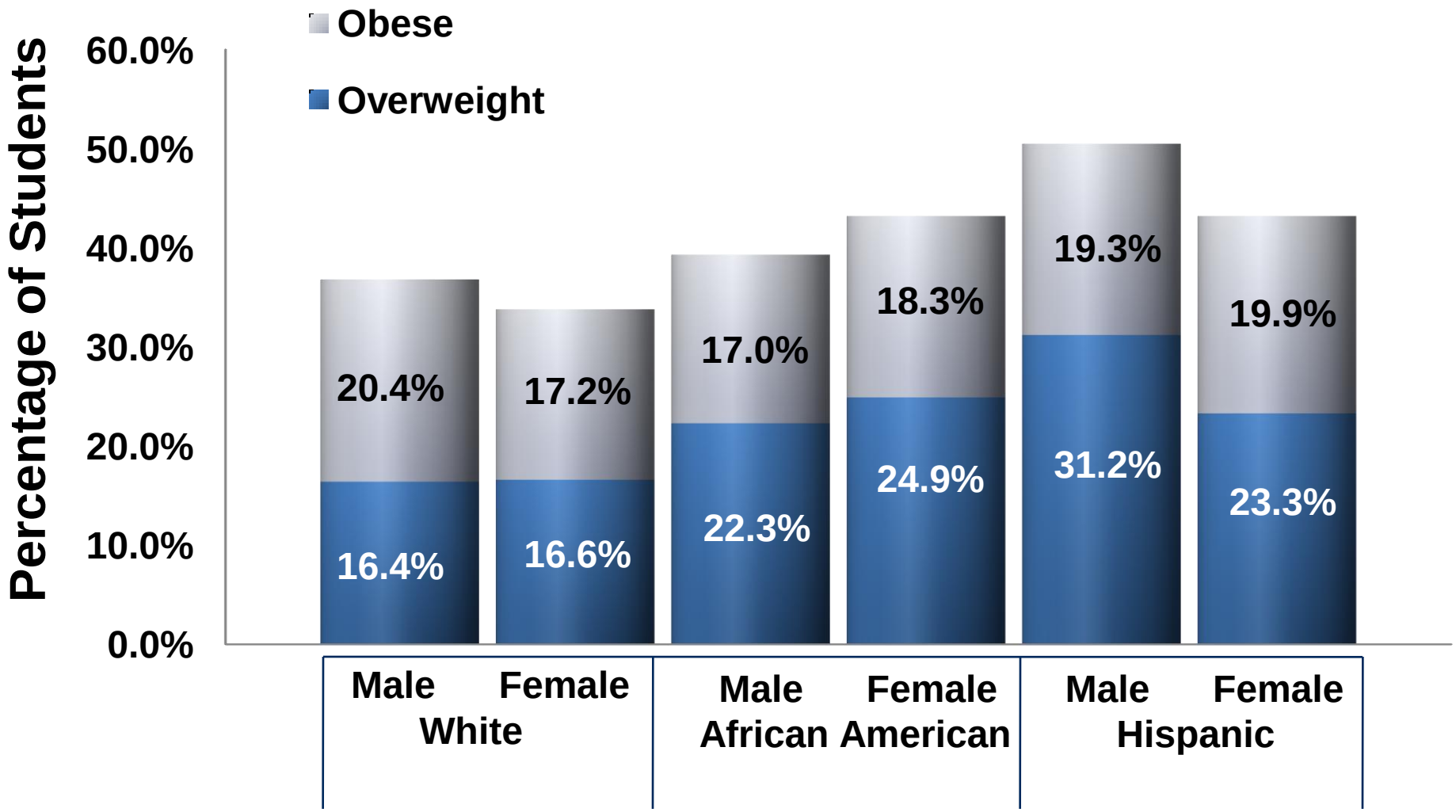
Data source: ACHI. *Assessment of Childhood and Adolescent Obesity in Arkansas (Year 6).* Little Rock, AR: ACHI; September 2009.

Percentage of students classified as overweight or obese by Arkansas public school district (2008–09)



Source: ACHI. *Assessment of Childhood and Adolescent Obesity in Arkansas (Year 6 Fall 2008–Spring 2009).* Little Rock, AR: ACHI; September 2009.

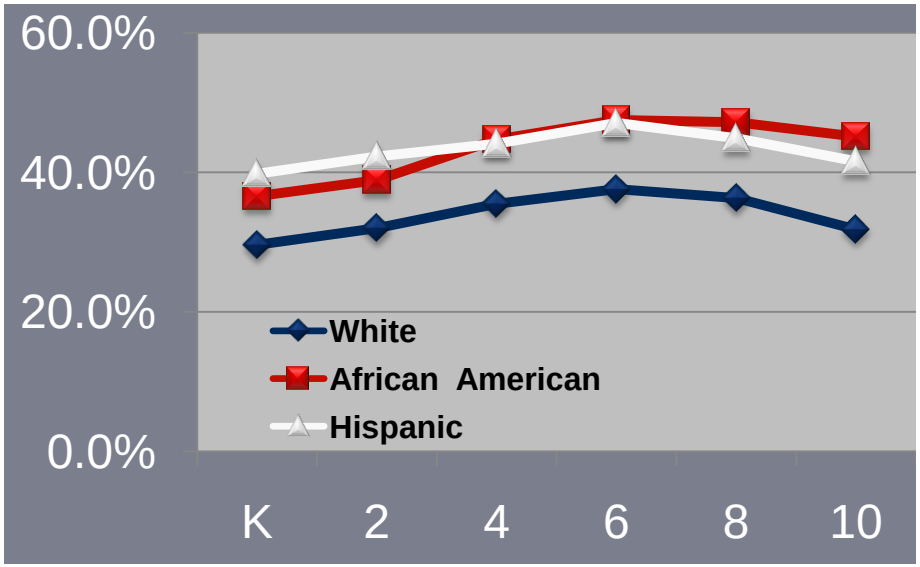
Percent by Gender and Ethnic Group (2008-2009)



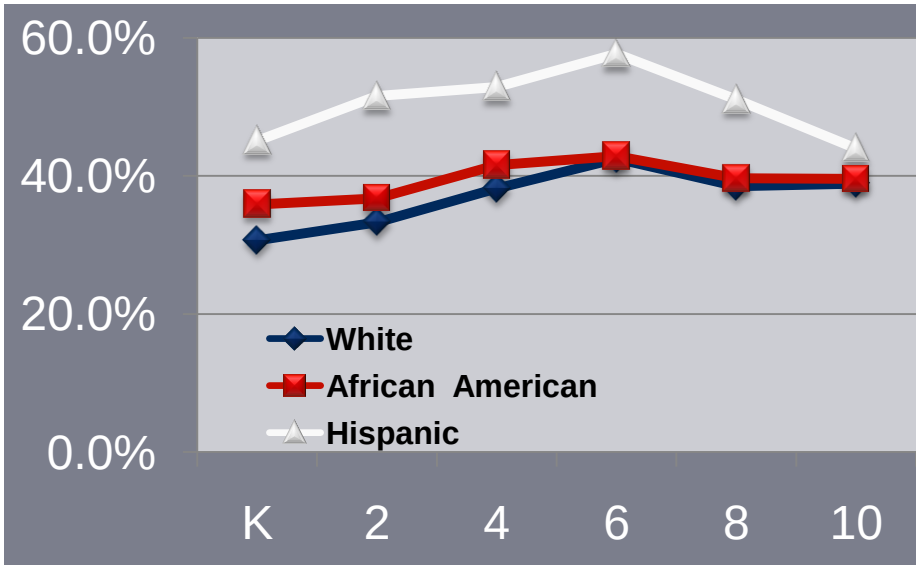
Data source: ACHI. *Assessment of Childhood and Adolescent Obesity in Arkansas (Year 6 Fall 2008–Spring 2009).* Little Rock, AR: ACHI; September 2009.

Percent Overweight or Obese by Gender, Ethnicity and Grade (2008-2009)

Female



Male



Source: ACHI. *Assessment of Childhood and Adolescent Obesity in Arkansas (Year 6 Fall 2008–Spring 2009).* Little Rock, AR: ACHI; September 2009.

UAMS College of Public Health Evaluation of Act 1220 (2006)

UAMS
FAY W. BOOZMAN COLLEGE OF PUBLIC HEALTH
UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES

- **Parents' awareness of obesity-related health problems increased (1/3 recognized problem > 2/3)**
- **95% of parents read some or all of the Child Health Report and 67% found the report helpful**
- **No feared consequences of BMI measurements**
- **Students reported purchasing more healthy drinks, such as water and other unsweetened beverages**
- **Innovations in schools and communities across the state – taste tests in cafeterias, curriculum changes**
- **Support of continued improvements to nutrition standards in school cafeterias**

Fay W. Boozman College of Public Health. Year Two Evaluation Arkansas Act 1220 of 2003 to Combat Childhood Obesity. http://www.uams.edu/coph/reports/Act1220Eval.pdf. Accessed 27 March, 2006.

Environmental Changes

Arkansas Board of Education Actions

- **Vending machines restricted until 30 minutes after lunch in all schools**
  - **12-ounce maximum beverage size**
  - **50% healthy options required**
- **No competitive foods in cafeterias**
- **Cafeteria food service education**
- **Nutrition and health curriculum changes**
- **30 minutes per day physical activity (K–12)**
  - **2007 changed to grades K–5**

Amending Act 1220 – Acts 201, 719, & 317 of 2007

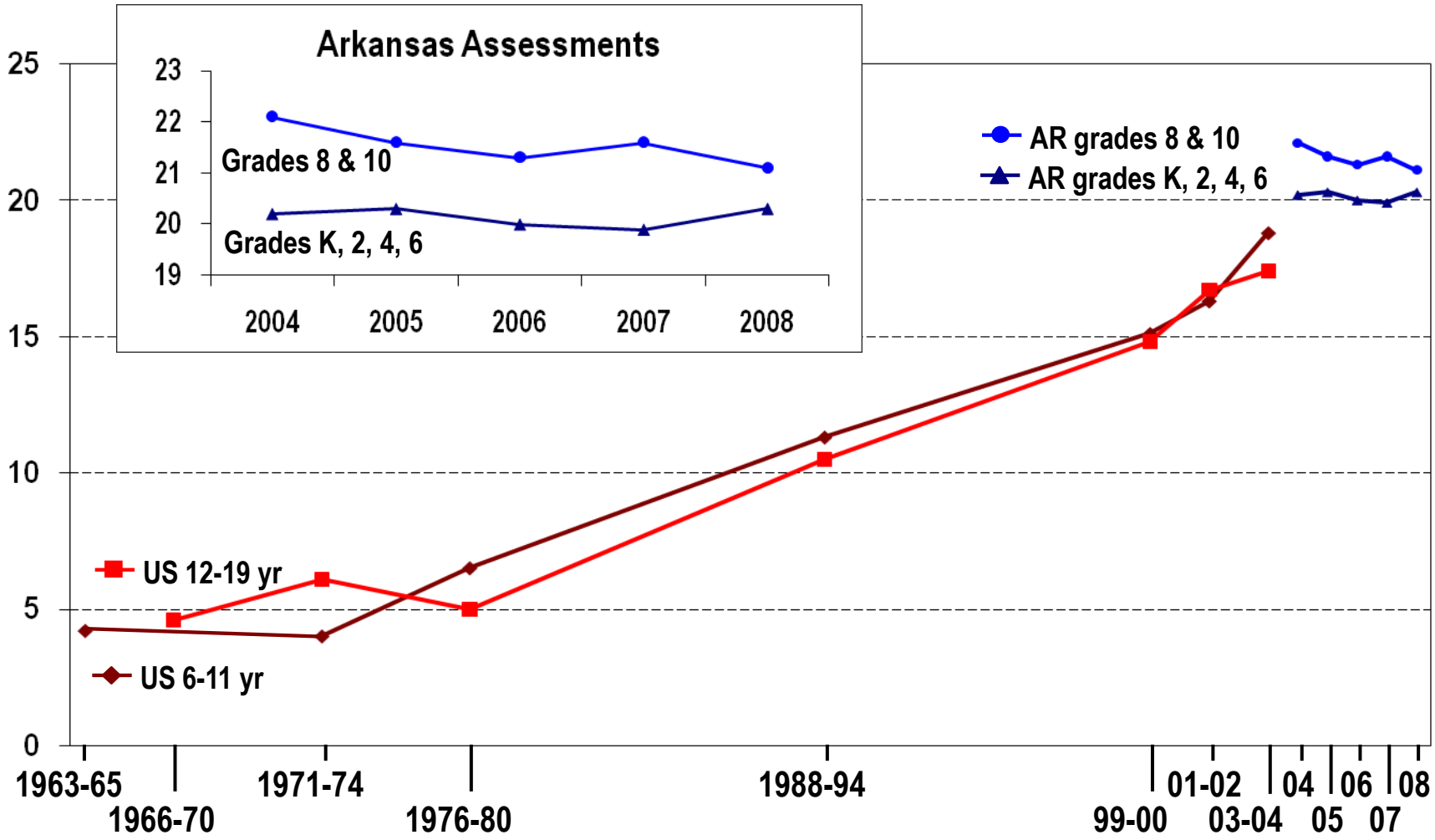
- **Periodicity of BMI assessments changed to every even year beginning in K thru 10th grade.**
- **Parents must provide an annual written refusal to keep child from participating.**
- **ADH nurses responsible for quality assurance to follow protocols.**
- **Adds 5 members to CHAC.**
- **Broadens CHAC scope to all school health.**
- **Eliminates Board of Ed physical activity requirements for all but K-5.**

Environmental Response

- Development of first CME program for clinicians
- Regionalization of secondary and tertiary care (e.g., Fitness Clinic at AR Children's Hospital)
- Increased awareness of physical activity needs (Mini-marathon)
- Changes to built environment (e.g., world's longest pedestrian bridge)

- School, community and faith-based initiatives
  - Arkansas Coalition for Obesity Prevention (ArCOP)
  - Child Wellness Intervention Program (CWIP)
  - Healthy Kids, Healthy Communities grantee site!

National and Arkansas Childhood Obesity Trends



Study data: AR annual average population assessed: Grades 8&10, N=54,564; Grades K,2,4,6, N=121,911
NHANES 03-04 sample size (weighted to national population): 6-11 yr, N=981; 12-19 yr, N=2,159
NHANES data sources: Ogden et al. *Prevalence and Trends in Overweight Among US Children and Adolescents, 1999-2000*. JAMA 2002;288(14):1728-1732. Ogden et al. *Prevalence of Overweight and Obesity in the United States, 1999-2004*. JAMA 2006;295(13):1549-1555.
Arkansas data source: Arkansas Center for Health Improvement, Little Rock, AR, September 2008.

www.achi.net

Robert Wood Johnson Foundation
Center to Prevent Childhood Obesity

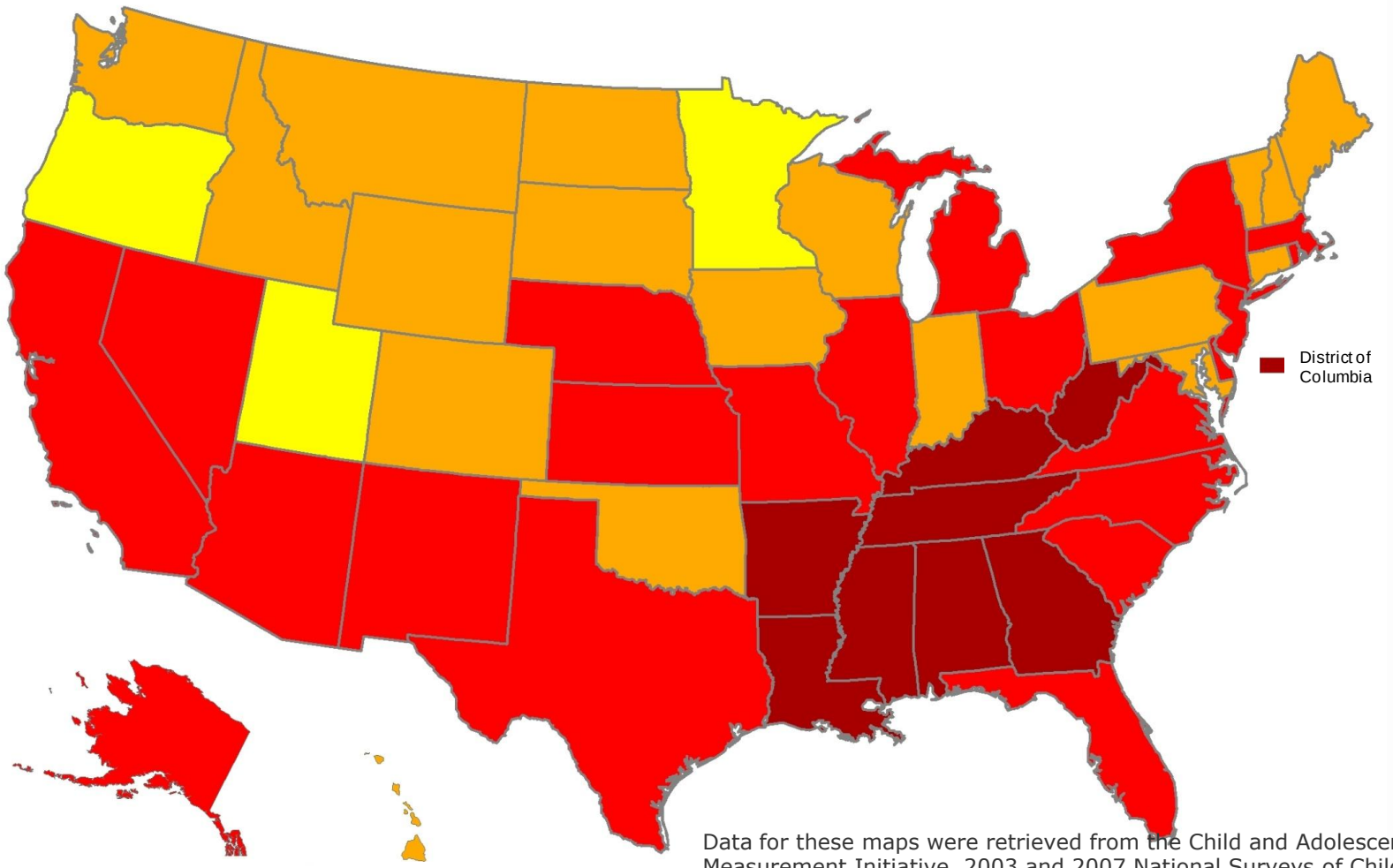
Leadership provided by
the Arkansas Center for Health Improvement
in strategic partnership with PolicyLink

Goals of the RWJF Center

- Reduce the prevalence of overweight and obesity among children in the U.S.
- Decrease disparities in childhood obesity
  - Communities of color
  - Impoverished areas
  - Disproportionately affected regions
- Create systemic, sustainable changes

Why Childhood Obesity?

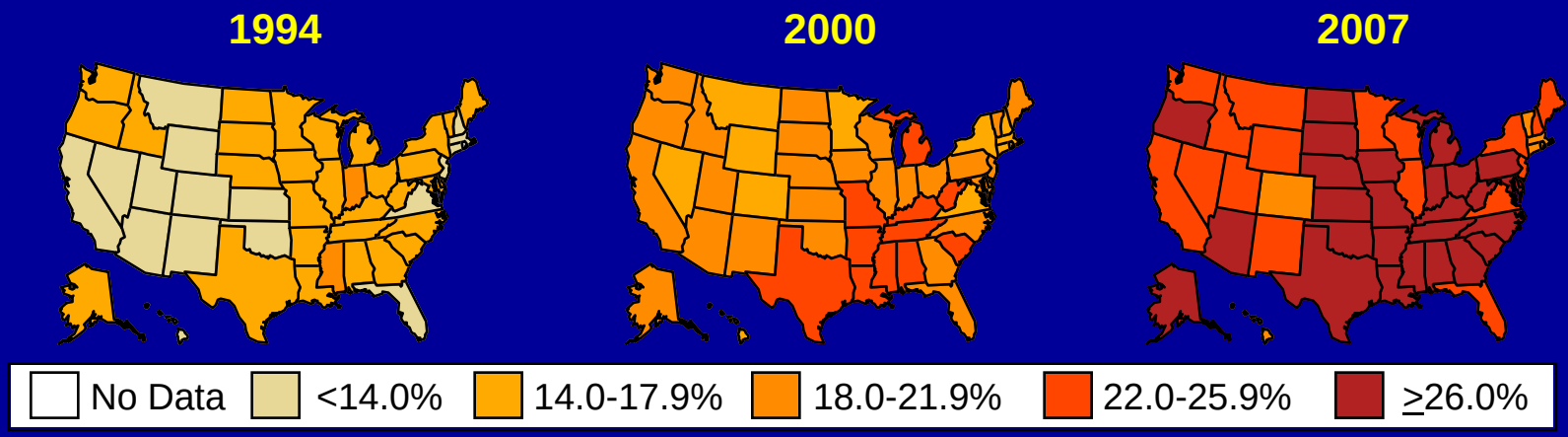
Percentage of Children who are Obese Aged 10–17 Years by State (2007)



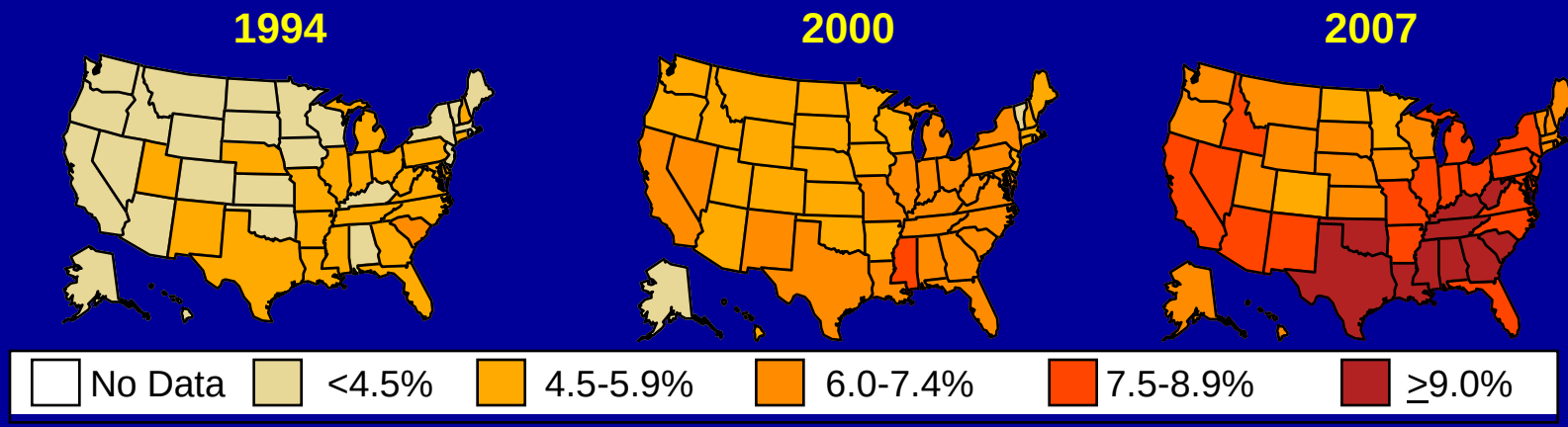
Data for these maps were retrieved from the Child and Adolescent Health Measurement Initiative, 2003 and 2007 National Surveys of Children's Health, Data Resource Center for Child and Adolescent Health website (accessed 10/03/08 and 5/26/09, www.nschdata.org).

Age-adjusted Percentage of U.S. Adults Who Were Obese or Who Had Diagnosed Diabetes

Obesity (BMI ≥30 kg/m^2)



Diabetes



CDC's Division of Diabetes Translation. National Diabetes Surveillance System available at http://www.cdc.gov/diabetes/statistics

Causes of Obesity Epidemic: Possible Hypotheses

- Genetic shift in population
- Physiologic changes in population:
  - Prenatal imprinting
  - Brain development
  - Food addiction
- Energy imbalance

Energy Balance Framework of the RWJF Center

- Increasing children's consumption of healthy foods and beverages and decreasing consumption of unhealthy alternatives
- Increasing physical activity
- Building awareness and support

Factors Linked to Creating Energy Imbalance

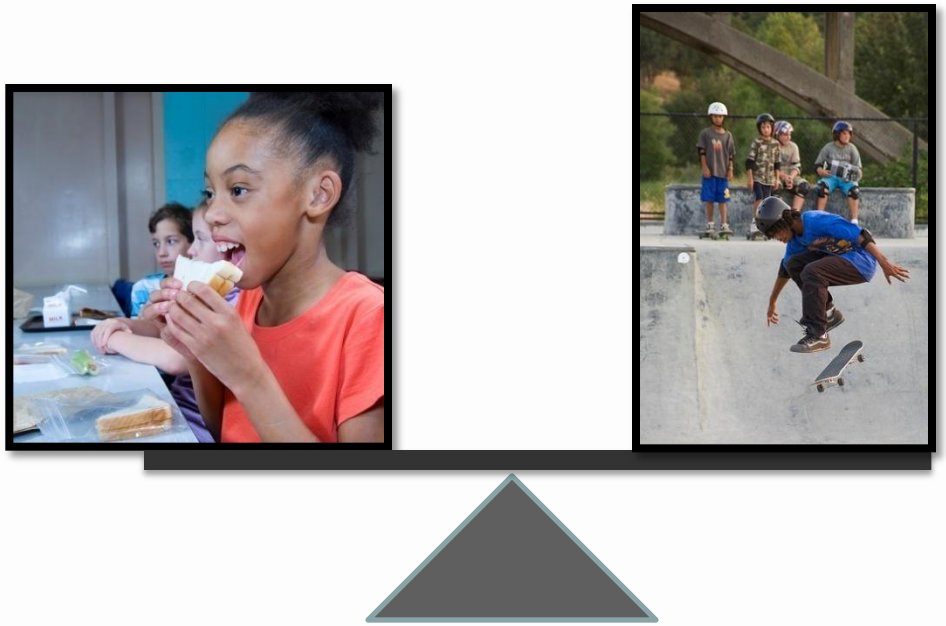
- **Food Environment**
- **Built Environment**
  - Transportation
  - Parks
  - Safety

- **Education and the School Setting**
- **Health Care**


VIACOM
Childhood obesity.
Don't take it lightly.
EAT FRUITS & VEGETABLES AND BE ACTIVE
Food Stamps can help. Call 1-888-328-3483 to see if you qualify.
4151
VIACOM
I'm lovin' it
my kinda shoppin' spree
Dollar Menu
1152

Policy Priorities for Energy Balance

- **Federal**
- **State**
- **Local**



Federal Policy Opportunities

- Child Nutrition and WIC

Federal Policy Opportunities

- Transportation

Federal Policy Opportunities

- K–12 Education

Federal Policy Opportunities

- Federal Trade Commission and Food Marketing

Federal Policy Opportunities

- Health Care
- Other Opportunities

State and Local Opportunities

- **Institute of Medicine**
  - *Local Government Actions to Prevent Childhood Obesity*
  - 58 action steps / 12 prioritized strategies
- **Centers for Disease Control and Prevention**
  - *Recommended Community Strategies and Measurements to Prevent Obesity* (7/09)
  - 24 Recommendations and assessments
- **Leadership for Healthy Communities**
  - *Action Strategies Toolkit* for local policy-makers (5/09)
  - 31 policy options and resources

IOM & CDC Recommended Strategies

Healthy Eating

- Incentives to attract supermarkets in underserved neighborhoods
- Discourage consumption of sugar-sweetened beverages and improve access to fresh drinking water
- Improve access to healthy foods from farms

IOM & CDC Recommended Strategies

- Improve and increase availability of affordable healthier food and beverage choices in public service venues including public schools
- Menu labeling

IOM & CDC Recommended Strategies

Physical Activity

- Joint use agreements
- Increase opportunities for physical activity in preschool, school, afterschool and child-care programs
- Improve safety and security of streets and park use, especially in higher-crime neighborhoods

IOM & CDC Recommended Strategies

- Develop safe and secure walking environments including safe routes to schools

Social Marketing

- Media campaigns to promote healthy eating and active living

Resources

RWJF Strategies/Programs

[Healthy Kids, Healthy America]

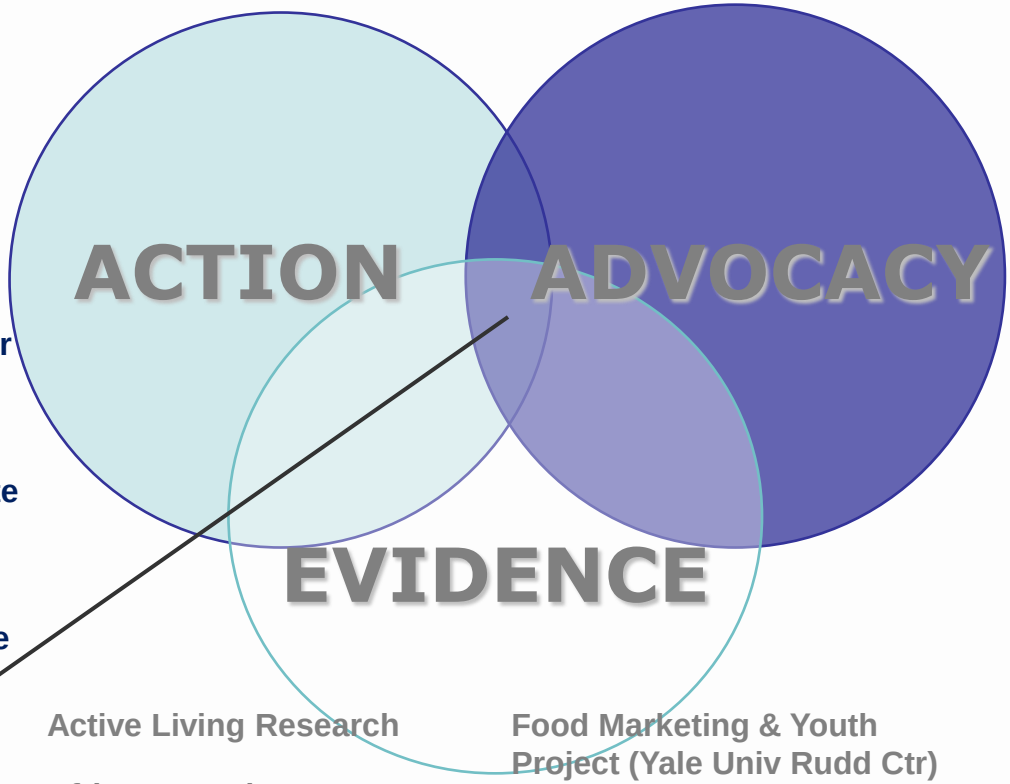
Healthy Kids, Healthy Communities

Healthy Schools Program (Alliance for a Healthier Generation)

New Jersey Partnership for Healthy Kids

Safe Routes to School National Partnership: State Network Project

Pioneering Healthier Communities: YMCA of the USA



RWJF Center to Prevent Childhood Obesity

IOM Standing Committee

Convergence Partnership

Active Living Research

African American Collaborative Obesity Research Network (AACORN)

Bridging the Gap

Food Marketing & Youth Project (Yale Univ Rudd Ctr)

Healthy Eating Research

Salud America!

National Collaborative on Childhood Obesity Research (NCCOR)

Communities Creating Healthy Environments

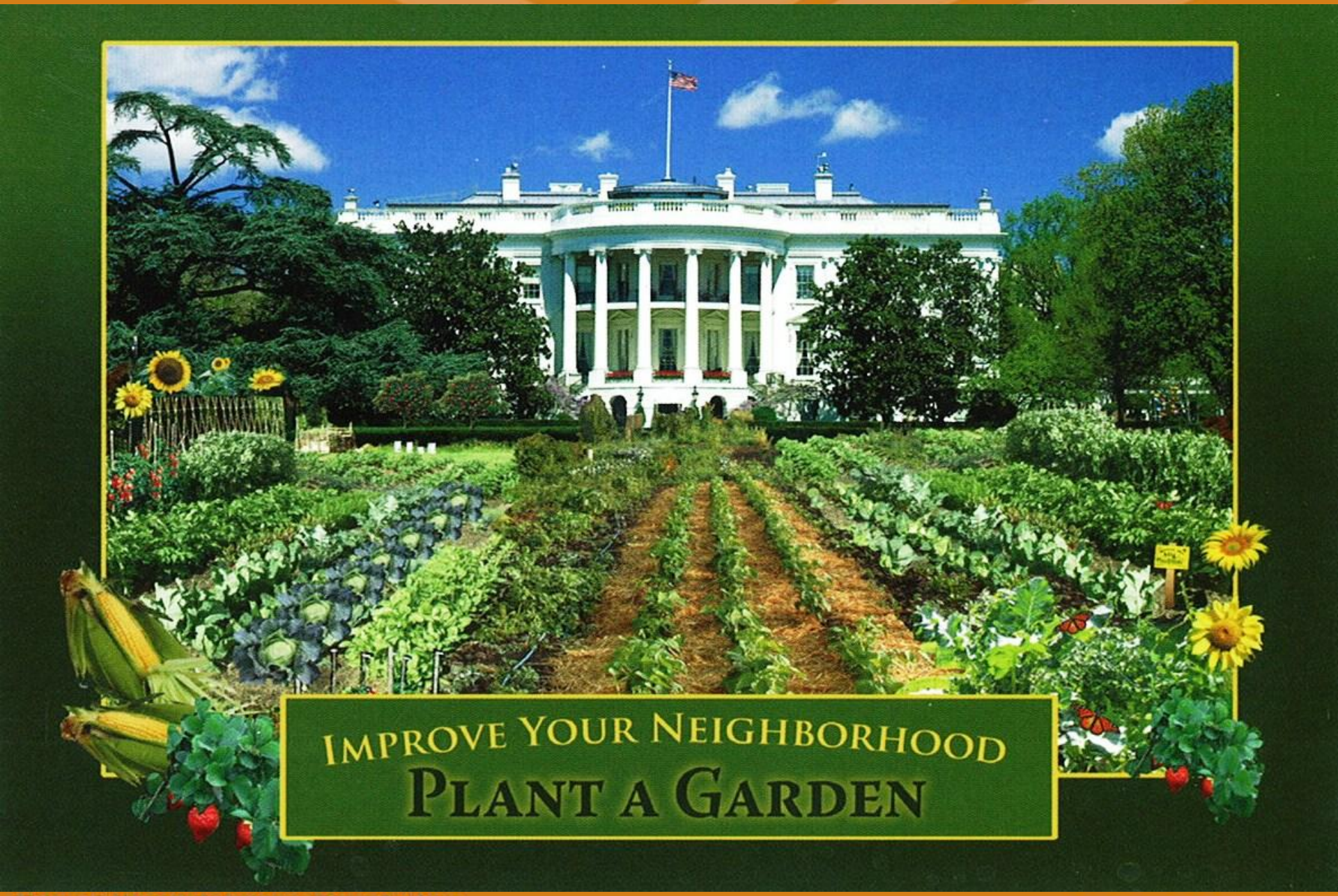
Faith-Based Advocacy: Galvanizing Communities to End Childhood Obesity

Leadership for Healthy Communities

Mobilizing Health Care Professionals as Community Leaders in the Fight Against Childhood Obesity

National Policy and Legal Analysis Network to Prevent Childhood Obesity

Campaign for Healthy Kids (Save the Children)


IMPROVE YOUR NEIGHBORHOOD
PLANT A GARDEN

Conclusion

- **Reversing the epidemic**
- **Targeting those most at risk**
  - Low-income, rural, children of color
- **Building a legacy of healthy communities**

Contact information

www.reversechildhoodobesity.org

paula@reversechildhoodobesity.org